Demographic Projections

Conditions on Alameda County's transportation system are projected for the year 2025 based on demographic projections developed from the Association of Bay Area Government's (ABAG*) Projections 2000* and the MTC regional and the Alameda County transportation models. The 2025 demographic projections are included here to show future roadway conditions with various future transportation investment scenarios.

Figure 2.2 and Table 2.2 illustrates the demographic projections used to prepare this plan. The population of Alameda County was 1,443,741 in 2000. That number is projected to increase 17.9 percent to 1,702,000 by the year 2025.

Although 2000 census figures are not yet available for households, jobs and employed residents, all are expected to increase by 2005. See Figure 2.2 and Table 2.2, which use 1990 census data as a baseline. An additional 111,800 households, a 23 percent increase, is projected, with nearly half of this growth (50,100 households) occurring in East County.

Similarly, the number of employed residents is expected to increase by 263,800 people, or 41 percent, between 1990 and 2025. Again, 30 percent of the increase (81,500 residents) can be found in East County.

There were approximately 644,000 jobs in Alameda County in 1990. This number is projected to increase 54 percent by the year 2025. South and East County are expected to split about two-thirds of the new jobs. Consequently, the greatest number of new morning and afternoon peak-hour vehicle trips generated by growth in Alameda County is expected in East County, followed by South County, Central County and North County.

Future Transportation Improvement Scenarios

This plan addresses two transportation improvement scenarios. Table 2.3 summarizes key aspects of each scenario. Transportation improvement programs are identified by using the terms "tracks" and "tiers"; MTC refers to tracks, while the CMA refers to tiers. The CMA is working with MTC to achieve consistency between the *Countywide Transportation Plan* and the *2001 Regional Transportation Plan* (RTP). The two planning documents are expected to be consistent.

Figure 2.2 — Demographic Projections for Alameda County

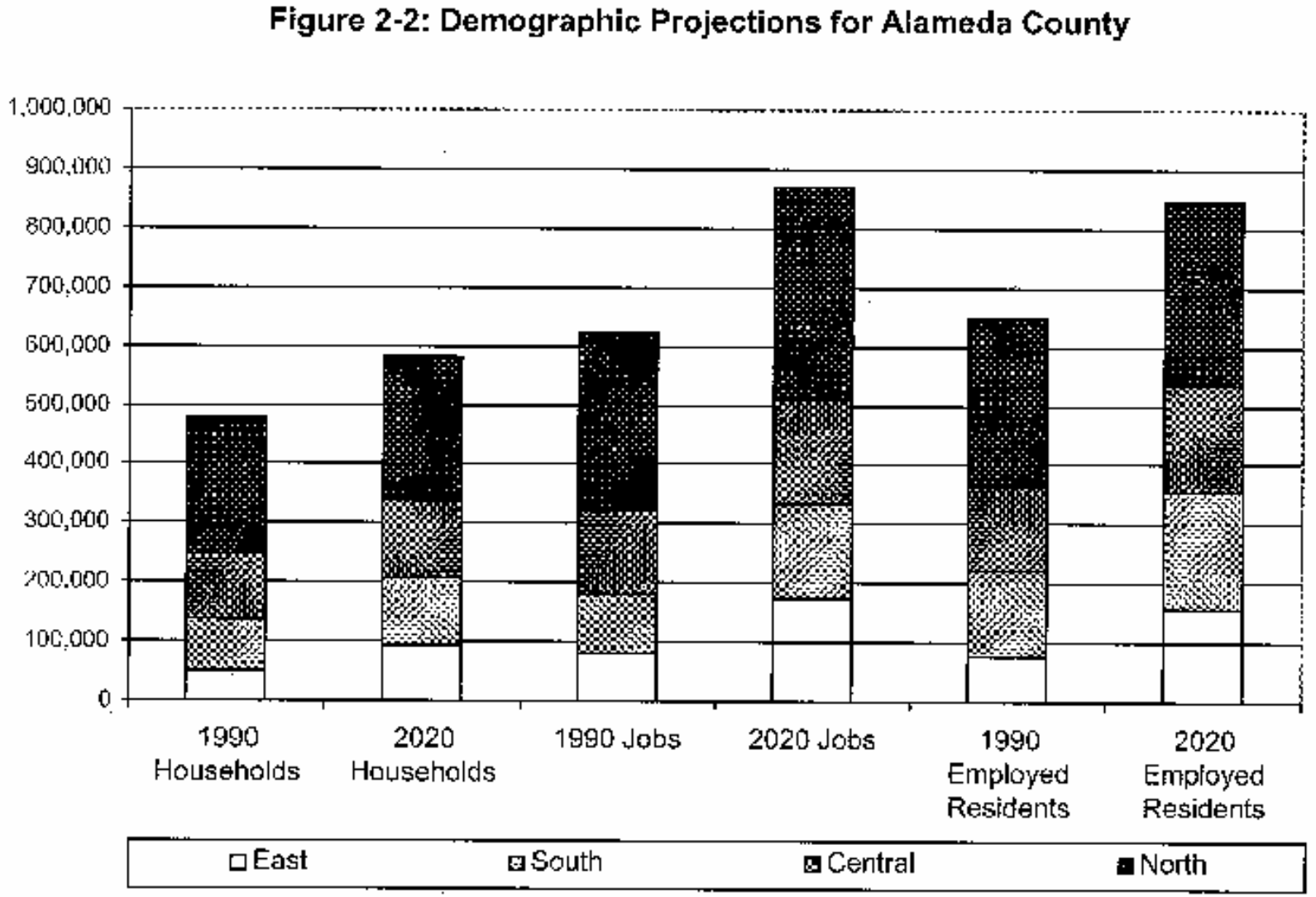

Table 2.2 — Growth Increment in Alameda County (1990-2025)

	HOUSEHOLDS (in 000's)			JOBS (in 000's)			POPULATION (in 000's)			EMPLOYED RESIDENTS (in 000's)		
	1990	2025	% Diff.	1990	2025	% Diff.	1990	2025	% Diff	1990	2025	% Diff
North	231.2	246.0	6.4	311.4	396.5	27.3	581.6	684.9	17.8	279.7	348.5	24.6
Central	112.8	133.6	18.4	145.4	201.6	38.7	295.2	375.8	27.3	146.5	192.9	31.7
South	87.6	113.7	29.8	104.3	188.7	80.9	264.1	368.8	39.6	144.6	211.7	46.4
East	47.9	98.0	104.6	83.0	204.4	146.3	135.8	272.1	100.4	75.1	156.6	108.5
Total	479.5	591.3	23.3	644.1	991.2	53.9	1276.7	1701.6	33.3	645.9	909.7	40.8

Table 2.3 — Summary of Future Transportation Improvement Scenarios

SCENARIO	HORIZON YEAR[1]	DESCRIPTION	BASIS FOR PROGRAM ASSUMPTIONS	SOURCE OF ASSUMPTIONS
One	2025	Projects with committed funding or are under construction[2]	Includes only transportation improvements with specific funding sources already in place	2000 and 2002 STIP/RTIP, 2001 TIP, 2001 CMA TIP, and Local CIPs
Two	2025	Scenario One plus Tier 1 CWTP projects	Adds transportation improvements adopted by the CMA Board assuming revenues from likely funding sources	CMA Board

Notes:

[1] Assumes Projections 2000-2020 land use extrapolated to 2025 using MTC's methodology and a year 2025 transportation improvement program.

[2] Includes capital improvement projects for which specific sources of funding have been identified, projects for which construction is expected by the year 2005 unless they are identified as a Tier 1 project on Table 6.3 in Chapter 6, and assumes an ongoing source of funding can be found for operations and maintenance given known funding programs and likely developer contributions.

Track I and Tier 1 represent year 2025 transportation improvement programs (using STP/CMAQ/STIP funds) based on reasonable expectations of available revenue during the 25-year timeframe of this plan. For Alameda County, Track I and Tier 1 represent approximately a $930 million investment. In November 2000, Alameda County residents renewed the half-cent sales tax for transportation, Measure B. These sales tax projects are also included in Tier 1 or the Committed List (Table 6.1). Tier 2 represents broader programs based on assumptions about new revenue sources such as an extension of Assembly Bill 2928 (Torlakson, Statutes of 2000). Tier 2 is based on funds that are possible, but not guaranteed and therefore are not modeled. Tier 3 represents programs from potential new revenue sources that are less certain and are also not modeled. Chapter 5, Revenues, provides greater detail about revenue estimates and assumptions.

Scenario One represents baseline transportation network conditions while Scenario Two represents transportation assumptions for the 25-year planning period. Scenario One assumes the existing transportation network plus transportation improvements with committed funding sources or that are under construction (referred to as "Committed Projects" in Table 6.1 in Chapter 6). Scenario Two represents a set of Tier 1 transportation improvement assumptions developed by the CMA Board. A full list of *Countywide Transportation Plan* Tier 1 projects is found in Chapter 6. Not all projects can be evaluated using the Countywide Travel Demand Model.

FUTURE TRANSPORTATION CONDITIONS

The transportation evaluation of the *Countywide Transportation Plan* included preparing a set of systemwide performance measures, plus analyzing localized/corridor level impacts for the following scenarios: 2005, 2025 Committed Projects and 2025 Tier 1. The Alameda County Travel Demand Model and *Projections 2000* 2025 land-use data were used in this evaluation. Figures 2.3 and 2.4 show the top congested locations during the morning and evening peak hours in 2025.

Figure 2.3 — 2025 Top A.M. Peak Hour Congested Locations in Alameda County

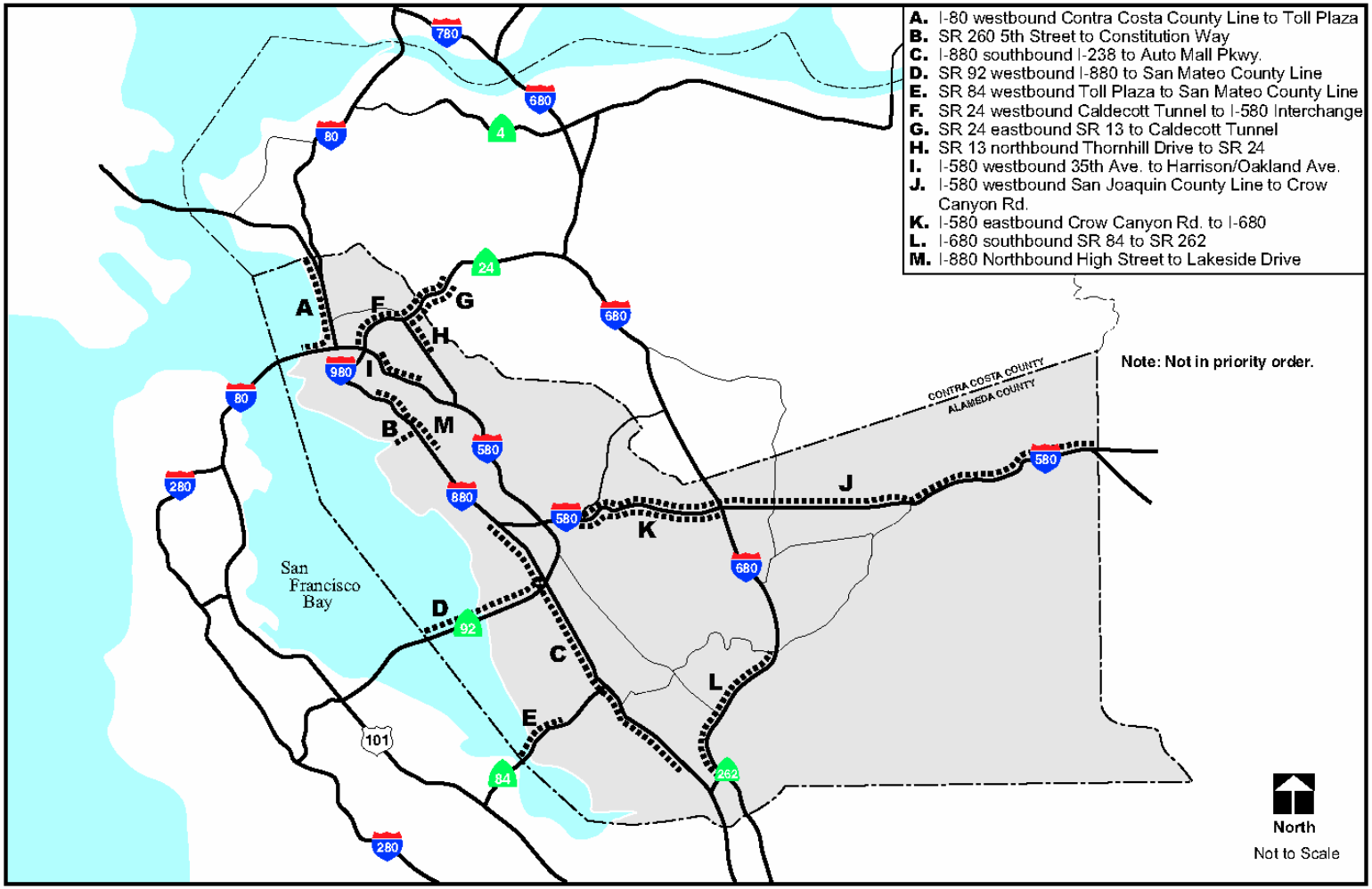

Figure 2.3
2025 AM Peak Congested Locations in Alameda County

Source: Alameda Countywide Model - 2025.

Figure 2.4 — 2025 Top P.M. Peak Hour Congested Locations in Alameda County

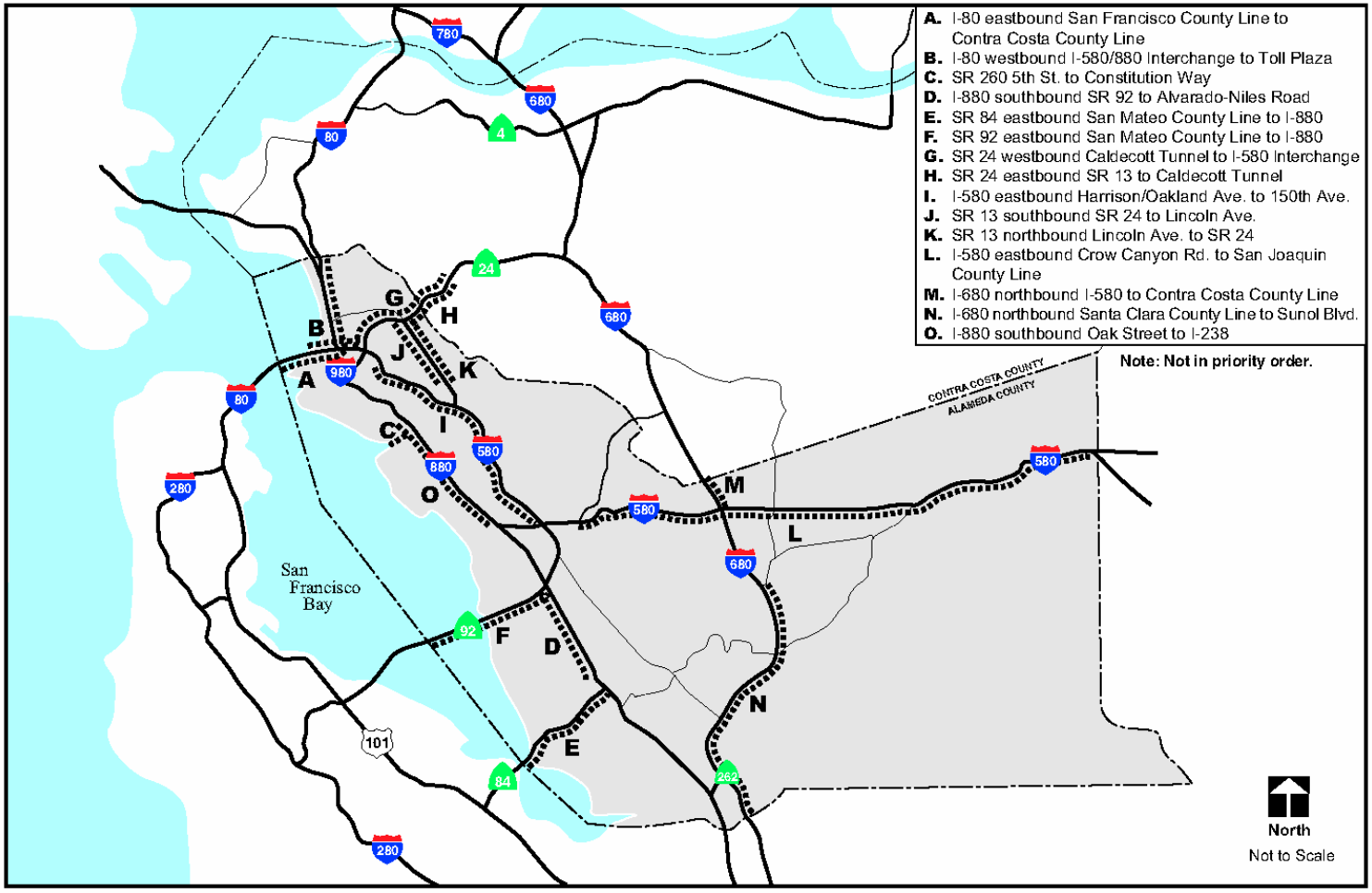

Figure 2.4
2025 PM Peak Congested Locations in Alameda County

Source: Alameda Countywide Model - 2025.

Systemwide Performance

Systemwide performance measures allow the full impact of major regional improvements to be captured. For example, if a stretch of congested freeway is widened, then the impacts on both the freeway and its parallel roadways would be reflected in the systemwide measures. The following set of systemwide performance measures were prepared for each scenario, for both the morning and evening peak hours:

- Vehicle-miles traveled on Alameda County roadways
- Time spent in congestion (person hours) on Alameda County roadway system
- Percent of Alameda County roadway system in congestion
- Average overall travel speed on the Alameda County roadway system
- Average trip duration (whole trip for those that start and end in Alameda County)
- Average trip length (whole trip for those that start and end in Alameda County)
- Mode choice for trips that start and end in Alameda County
- Transit ridership within Alameda County

Systemwide performance measures allow the full impact of major regional improvements to be captured.

Tables 2.4 and 2.5 show the systemwide performance measures for 2005, 2025 Committed Projects and 2025 Tier 1 conditions. The following conclusions can be drawn from these measures:

- Compared to 2005 conditions, the 2025 Committed Projects would result in about a 16 percent increase in total person trips and a 13 percent increase in vehicle-miles traveled. These conditions would be about the same under 2025 Tier 1 conditions.
- In 2005 about 19 percent of the county's roadways operate at congested conditions (LOS E or LOS F) during the a.m. peak hour and about 24 percent of roadways operate at congested conditions during the p.m. peak hour. Under the 2025 Committed Projects about 26 and 39 percent of the county's roadway system would operate at congested conditions in the a.m. and p.m. peak hours, respectively. The amount of roadways operating at congested conditions under 2025 Tier 1 conditions would be 25 percent and 35 percent for the a.m. and p.m. peak hours, respectively.

Table 2.4 — Changes in A.M. Peak Hour Transportation Performance

Performance Measure	2005	20251 Scenario One (Committed)	2025 Scenario Two (Committed + Tier 1)
Population	1,521,972	1,650,146	1,650,146
Employment	781,008	991,186	991,186
A.M. Peak Hour Vehicle Data			
Vehicle-Miles Traveled (VMT)	2.1 million	2.4 million	2.4 million
Time Spent in Congestion (in person-hours)	16,600	23,100	21,100
Percentage of Roadway System in Congestion	19.40%	26.10%	25.40%
Average Overall Travel Speed (in mph)	24.1	23.2	23.4
Average Trip Duration (in minutes)	22.2	22.5	22.3
Average Trip Length (in miles)	8.9	8.7	8.7 miles

Notes:
Assumes Projections '00 2025 land use and a year 2005 transportation investment program.

Source:
ABAG Projections '00 for Population and Employment. Alameda Countywide Travel Demand Model for all other performance measures on the Metropolitan Transportation System (MTS).

Table 2.5 — Changes in P.M. Peak Hour, Daily Mode Choice, Daily Transit Ridership, and Daily Transportation Performance

Performance Measure	2005	20251 Scenario One (Committed)	2025 Scenario Two (Committed + Tier 1)
Population	1,521,972	1,650,146	1,650,146
Employment	781,008	991,186	991,186
P.M. Peak Hour Vehicle Data			
Vehicle-Miles Traveled (VMT)	2.3 million	2.6 million	2.6 million
Time Spent in Congestion (in person-hours)	22,300	35,000	30,800
Percentage of Roadway System in Congestion	23.60%	38.60%	35.30%
Average Overall Travel Speed (in mph)	25.9	24.9	25.1
Average Trip Duration (in minutes)	22.8	22.9	22.7
Average Trip Length (in miles)	9.8	9.5	9.5

Performance Measure	2005		2025[1] Scenario One (Committed)		2025 Scenario Two (Committed + Tier 1)	
Mode Choice and Transit Data per Day						
Work Mode Shares	Trips[2]	%	Trips[2]	%	Trips[2]	%
-Drive Alone	988.6	85%	1122.3	80%	1119.2	79%
-Two-Person Auto	60.8	5%	90.8	6%	90.1	6%
-Three-Person Auto	13.1	1%	18.0	1%	17.9	1%
-Transit	97.1	9%	176.9	13%	184.6	13%
-Total *	1159.6	100%	1408.0	100%	1411.8	100%
Work vs. Non-Work						
-Work Trips	1159.6	23%	1408.0	24%	1411.8	24%
-Non-Work Trips	3937.1	77%	4514.6	76%	4516.1	76%
-Total Trips	5096.7	100%	5922.5	100%	5928.0	100%
Daily Transit Ridership All Provider	263,800		376,100		388,500	

* Percentage total does not add to 100 percent due to rounding.

Notes:

1. Assumes Projections '00 2025 land use and a year 2005 transportation investment program.
2. Numbers reported in 000's.

Source: ABAG Projections '00 for Population and Employment. Alameda Countywide Travel Demand Model for all other performance measures on the Metropolitan Transportation System (MTS).